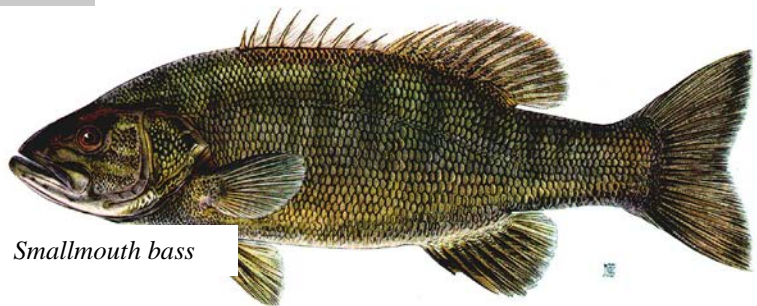

Black Bass Anglers' Experiences in New York and Their Views on Tournaments and Fisheries Management



Smallmouth bass



Largemouth bass

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EXECUTIVE SUMMARY

This study, conducted by Cornell University, was designed to focus on anglers with a special interest in black bass fishing in New York State. Fishery managers were interested in characterizing black bass anglers' fishing activity, their satisfaction with their fishing experiences, and their views on a variety of management topics, particularly the relatively recent change in regulations that allows for catch and release of black bass during the winter/spring season. They were also interested in gauging angler participation in black bass fishing tournaments and their views on tournaments occurring in New York State.

The specific objectives of the study were to:

1. Assess black bass anglers' opinions on current fishing regulations related to black bass
2. Understand black bass anglers' views on fishing tournaments being held in NYS, and
3. Characterize black bass anglers and their satisfaction with overall fisheries management in New York.

Anglers who participated in the 2007 New York Statewide Angler Survey and who identified black bass as their first or second most favored species to fish for and gave explicit permission to be recontacted, formed the sample for this study. From this group we randomly drew 1,500 anglers to survey. The mail survey was implemented in October, 2012 and asked anglers about their fishing activity, tournament participation and views on tournaments, opinions on black bass management in New York, and socio-demographic characteristics.

Of the 1,500 questionnaires mailed, 203 were undeliverable, and 746 completed questionnaires were returned. The adjusted response rate was 58%. The response rate to this survey was quite high compared to recent angler surveys. This gives us more confidence that the results are representative of anglers with a preference for black bass fishing in New York. We also compared respondents and non-respondents using data available from the fishing license, and found little difference except in terms of age, with respondents being six years older on average compared to non-respondents. This may be a source of bias in the data, with the potential for bias increased because our sample did not include newly licensed, generally younger, anglers. If we weighted the data to account for the difference in age, there would only be a change of one to two percent for any given management preference question. This gives an indication of the degree of change due to age. However, we have no way to know the impact of "newly licensed" anglers.

The majority of anglers did not distinguish between largemouth and smallmouth bass, favoring and fishing for each equally. Management preferences were not related to species preference; this suggests that managers can consider the interests of black bass anglers as a group, rather than partitioning interests of largemouth bass anglers versus smallmouth bass anglers.

The opportunity to catch at least one bass on most fishing trips was important to most anglers, as was the opportunity to catch a bass on every trip. Catching a lot of bass, or a trophy-sized bass was less important to most people.

Anglers used a variety of sources for information on black bass fishing in New York, but 85% of respondents obtained information about black bass fishing from at least one of the four DEC sources listed in the questionnaire (i.e., fishing regulations guide, other DEC publications, DEC website, and DEC personnel). DEC's use of these communication sources in the future to provide anglers with information about black bass will likely reach most anglers. Few anglers were members of a black bass fishing club or organization, and most members obtained information from the fishing regulations guide or the DEC website.

Almost three-quarters (72%) of anglers were satisfied with their black bass fishing experiences in New York in 2012. While satisfaction with the fishing experience can be influenced by a variety of factors, some are within the agency's control (e.g., creel limits) and some are outside the agency's control (e.g., weather). This high level of satisfaction may be difficult to improve upon via factors within the agency's control, but would be a useful topic for managers' discussion.

On management issues:

- Most anglers thought the 12" minimum size limit should be kept as is.
- Over three-quarters of all anglers wanted the 3rd Saturday in June kept as the harvest season opening date.
- Ninety percent of anglers wanted to see the closing date of the harvest season of November 30 remain as is.
- Most anglers indicated they would support special regulations to increase the number of black bass on certain waters that they fished.
- Similarly, a majority of anglers supported special regulations that would increase their chances of catching a larger black bass.
- Support or opposition for special regulations appears to exist regardless of the objective for the regulation. If anglers support special regulations to accomplish increasing the number of black bass, they are very likely to also support special regulations to increase their chances of catching a larger black bass. Similarly, if anglers oppose special regulations intended to achieve a particular objective they are also likely to oppose special regulations intended to achieve another objective.
- Most anglers wanted to see the winter/spring catch and release season for black bass continue, and continue as is. More than 40% of respondents fished at some point during the winter/spring catch and release season over the past six years. Virtually all (97%) of the anglers who fished during the winter/spring catch and release season wanted to see it continue in the future. Most of those (65%) who didn't fish during the season also wanted to see it continue in the future.

Older anglers (aged 60+) wanted to maintain the status quo on most management issues listed above. Because the sample includes some bias toward older anglers, the results above are skewed toward stronger support for the status quo by at least one to two percentage points. The difference may be even a bit higher due to the impact of "newly licensed" anglers who are not included in the sample, but the amount of impact, while likely small, is not known.

Most anglers were satisfied with the job DEC, Bureau of Fisheries was doing managing black bass. The most avid anglers (those fishing >20 days for black bass) were also the ones most

likely to be satisfied compared to those who fished fewer days (78% vs. 60%). DEC, Bureau of Fisheries may take pride in this high level of satisfaction, and work to address the concerns raised in the results section of the report to perhaps further increase satisfaction levels. Fisheries staff may also consider focusing on actions supported by many anglers, such as managing habitat for black bass reproduction and growth, developing and improving access sites, and communicating more with anglers about black bass fishing opportunities. DEC, Bureau of Fisheries also may partner with other organizations to implement some of these actions.

Two-thirds of anglers had not participated in a black bass tournament in New York in the past 5 years and had no interest in participating in the future. The remainder (32%) had either participated in a tournament in the past 5 years, or had interest in participating in the future. Anglers who participated in tournaments were more likely to belong to a black bass fishing club or organization.

Anglers who have participated in a tournament think: a) tournaments provide a boost to local economies, b) a weigh-in is a necessary part of tournaments, c) tournaments are an important tool to promote catch and release fishing, d) most released fish survive, and e) they would like to have more opportunities to fish in black bass tournaments in New York. Those with no interest in fishing in a tournament tended to agree that tournaments provide an economic boost, but they were generally neutral on the other items, and disagreed about wanting more opportunities to participate in tournaments. Those with no interest in tournament participation also think tournaments should be held only on larger waters, and that they reduce the quality of the fishing experience for non-tournament anglers, but do not think they should be banned. More information could be provided on the effects of tournaments on fish, as one-quarter do not know what the impacts are.

We hope that results of this study will assist DEC, Bureau of Fisheries managers and others interested in black bass fishing in better understanding the views of black bass anglers in New York. Discussion among fisheries managers about these results may help DEC achieve their goal of managing and conserving the freshwater fisheries of New York State to serve the interests of current and future generations of New Yorkers.

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INTRODUCTION

The New York State Department of Environmental Conservation (DEC), Bureau of Fisheries is charged with managing and conserving the freshwater fisheries of New York State to serve the interests of current and future generations of New Yorkers. As part of their management efforts they seek systematically collected information from one of their primary stakeholder groups – anglers. For a number of years they have obtained information from anglers on fishing patterns, preferences, and opinions as part of the New York Statewide Angler Survey. However, that survey is conducted every ten years on average, and does not provide opportunities for managers to gather more urgently needed information in the intervening period, or more specific information from a subset of anglers.

The study, reported on herein and conducted by Cornell University, was designed to focus on anglers with a special interest in black bass fishing in New York State. Fishery managers were interested in characterizing black bass anglers' fishing activity, their satisfaction with their fishing experiences, and their views on a variety of management topics, particularly the relatively recent change in regulations that allows for catch and release of black bass during the winter/spring season. They were also interested in gauging angler participation in black bass fishing tournaments and their views on tournaments occurring in New York State.

The specific objectives of the study were to:

1. Assess black bass anglers' opinions on current fishing regulations related to black bass
2. Understand black bass anglers' views on fishing tournaments being held in NYS, and
3. Characterize black bass anglers and their satisfaction with overall fisheries management in New York.

METHODS

Sample Selection

Anglers who participated in the 2007 New York Statewide Angler Survey and gave explicit permission for Cornell University to recontact them with follow-up surveys based on their fishing interests or participation formed the basis for the sample for this study (n=10,724). Of those, 2,957 anglers indicated that black bass was their favorite species to fish for in NYS in 2007. An additional 1,785 anglers indicated that black bass was their second most favored species to fish for. This group (n=4,742), who identified black bass as their first or second most favored species to fish for and gave explicit permission to be recontacted formed the sample from which we randomly drew 1,500 anglers to survey in this study.

Questionnaire Design

The questionnaire was designed based on previous work in New York and Texas so that comparison of results over time and between states would be possible (Connelly et al. 1998, Ditton and Hunt 1996). Additional questions were added to address specific project objectives,

and reviewed by leadership and staff in the Bureau of Fisheries. The questionnaire (Appendix A) included sections on fishing activity, tournament participation and views on tournaments, opinions on black bass management in New York, and socio-demographic characteristics.

Mail Survey Implementation

The mail survey was implemented in October, 2012. Up to three follow-up mailings were sent to non-respondents over the course of the next four weeks to encourage their response.

Tests for Non-response Bias

Data available from the fishing license was used to compare respondents and non-respondents. Comparative information included age, gender, and state of residence.

A telephone follow-up survey of 100 non-respondents was implemented approximately two months after the first mailing of the questionnaire to estimate the degree to which non-respondents differed from respondents. Key questions from the mail survey (listed in Appendix B) were asked over the telephone about fishing effort, opinions on management issues, and tournaments.

Analysis Methods

Data from returned questionnaires were entered into the computer and analysis was done using SPSS (IBM SPSS Statistics 20). Chi-square, t-tests, and Scheffe's test were used to test for statistically significant differences between groups of anglers at the $P \leq 0.05$ level.

A weight factor was created to account for a difference in age between respondents and non-respondents. Respondents tended to be older than non-respondents. The weight factor was applied to each age group such that the proportion of respondents in each age group reflected the sample proportions. A weight factor of 1.39 was applied to respondents under age 50, 0.91 to respondents age 50 to 59, and 0.85 to respondents age 60 or over. This weight factor was used to look at the change in the results of management preference variables when age was significantly related to management preference.

RESULTS AND DISCUSSION

Mail Survey Response

Of the 1,500 questionnaires mailed, 203 were undeliverable, and 746 completed questionnaires were returned. The adjusted response rate was 58%.

Non-response Bias Analysis

Respondents and non-respondents to the mail survey were compared using information available from the fishing license. No differences were found based on gender or state of residence (Appendix Table B-1). However, respondents were significantly older than non-respondents. This demographic difference is common with the mail survey method (e.g., Connelly and Knuth

2010, Connelly et al. 1992). For management preference questions where response differed by age, a weight factor, weighing more heavily the younger respondents compared to the older respondents, was used to compare unweighted and weighted responses. When this weight factor was applied it changed the overall responses by one or two percent. The changes were not greater in part because respondents accounted for over half of the sample (58%) to begin with. So what might appear to be a large difference in age between respondents and non-respondents did not change the overall results very much. Therefore, the overall responses reported in the tables below are unweighted.

Another common difference found between respondents and non-respondents, based on data from the follow-up telephone interviews with non-respondents, was their level of fishing activity. Respondents were more likely than non-respondents to have fished for black bass in 2012, and if they did fish for black bass, they fished more days on average (Appendix Table B-2). Respondents and non-respondents did not tend to differ in their views on bass management. However, their views on bass tournaments did differ, but their participation in tournaments did not. Non-respondents were more likely to indicate that they did not want more opportunities for tournaments for themselves, whereas respondents were more neutral about their interest in participating in tournaments. More non-respondents did not think tournaments reduced the quality of the fishing experience for non-tournament anglers, but more respondents did. The majority of non-respondents thought fish caught in tournaments and then released survived, whereas respondents were more divided in their opinions. The implications of these differences are discussed in more detail in the subsequent section of the report on tournaments.

Angler Characteristics and Information Sources Used

The population of interest for this study was anglers who had a strong preference for black bass fishing in New York. As such, the sample was drawn from anglers who responded to an earlier survey indicating black bass as among their top two favorite species to fish for in New York. The current survey inquired if black bass were still among the top two favorite species; 92% of respondents said “yes.” These respondents (n=680) form the sample for all further analysis. Thus, the results are representative of anglers who currently have a strong preference for black bass fishing in New York.

Most respondents were male (Table 1). For the most part they lived in New York, with the majority characterizing the area they lived in as rural. Few lived in an urban area, and few were members of a black bass fishing club or organization. Responding anglers tended to be older, with almost half aged 60 or older. This is a result of the tendency for older anglers to respond to mail surveys, as discussed above, but also because the original sample was drawn in 2007, so the youngest/ newest angler groups are not represented in the sample. Weighting for the age-related bias will change the percentages by one to two percent, as discussed above, but the impact of the youngest/newest anglers who began fishing after 2007 and who prefer to fish for bass is unknown. For these reasons, it is important to examine all results by age groups, and if differences are found, to consider the implications when making statements about all anglers.

Table 1. Responding angler characteristics.

<u>Angler Characteristics</u>	<u>Percent</u>
Gender	
Male	89.2
Female	10.8
Age	
< 40	10.7
40-49	13.2
50-59	29.9
60+	46.2
Primary residence	
Urban	9.1
Suburban	36.6
Rural	54.3
State of residence	
New York	91.6
Other	8.4
Member of a black bass fishing club or organization	
No	89.8
Yes	10.2

Anglers were asked which species, largemouth or smallmouth bass, they preferred more and which they primarily fished for (Table 2). The majority did not distinguish between the two species, favoring and fishing for each equally. Among those who did distinguish, they were evenly split between largemouth and smallmouth bass.

Table 2. Favorite species to fish for and species primarily fished for.

	<u>Favorite species</u>	<u>Fish primarily for</u>
	Percent	
Both largemouth and smallmouth bass	49.3	58.4
Largemouth	20.6	21.1
Smallmouth	20.5	20.5
Other species is most favorite	9.6	na

The majority of anglers do not keep any of the largemouth or smallmouth bass of legal size that they catch (Table 3). We created a variable to be used in later comparisons with management preferences that categorized anglers into a harvest group if they indicated that they keep either largemouth or smallmouth bass at least some of the time (46% of anglers). All other anglers who said they never keep legal size largemouth or smallmouth bass were put in the “catch and release only” group (54%).

Table 3. Percent of anglers that typically keep the legal size fish they catch, by bass species.

Typically keep fish caught if of legal size	Largemouth bass	Smallmouth bass
	Percent	
No	59.8	57.6
Yes, some of the time	27.0	27.9
Yes, most of the time	8.5	9.8
Yes, always	4.7	4.7

Most anglers used artificial lures most often when fishing for black bass (74%). Few used baitfish (8%) most often or other natural baits (such as crayfish, insects, pork rinds, worms) (18%). Those using baitfish or other natural baits were combined into one group in subsequent comparisons with management preference questions. The majority of these anglers kept at least some of the fish they caught (56%), whereas the majority of those using artificial lures practiced catch and release only (58%).

Comparisons with the management preference variables and tournament-related variables are presented later in the report using the following variables: gender, age, rural vs. urban/suburban, artificial lures vs. natural baits, catch and release vs. keep some catch, and species primarily fished for (largemouth vs. smallmouth vs. both). Statistically significant differences ($p < 0.05$) for these groups are highlighted. If no differences are reported, the reader may assume there were no significant differences.

The opportunity to catch at least one bass on most fishing trips was important to most anglers, as was the opportunity to catch a bass on every trip (Table 4). Catching a lot of bass, or a trophy-sized bass was less important to most people. Catching fish was less important for older anglers.

Table 4. The importance of different types of catch opportunities to anglers when fishing for black bass.

Importance of catching bass	Not at all important	Somewhat important	Important	Very important	Extremely important
	Percent				
Catch at least one bass on most trips	8.0	17.2	25.7	25.7	23.4
Catch at least one bass on every trip	11.0	18.7	28.4	23.9	18.0
Catch a lot of bass	24.4	33.0	26.8	9.9	5.9
Catch a trophy-sized bass	36.5	33.4	17.6	8.1	4.4

Anglers used a variety of sources for information on black bass fishing in New York, but the source used by most anglers was the fishing regulations guide (Table 5). The DEC website was also popular and was used by 40% of anglers. In fact, 85% of respondents obtained information about black bass fishing from at least one of the four DEC sources listed in the questionnaire (i.e., fishing regulations guide, other DEC publications, DEC website, and DEC personnel). Friends and family was also a source used by almost half of the anglers. The other sources, such as mass media outlets, were used by less than one-quarter of the anglers.

Table 5. Sources used by anglers when looking for information about black bass in New York, overall and for members of bass clubs or organizations.

<u>Sources of New York black bass information</u>	<u>All anglers</u>	<u>Members of bass clubs or organizations</u>
	Percent checking*	
<u>DEC printed materials</u>		
Fishing regulations guide	76.5	69.6
Other DEC publications	13.4	18.8
<u>Personal contact</u>		
Friends and family	48.2	46.4
Charter boat captains or fishing guides	8.8	14.5
DEC personnel	7.1	4.3
Other government employees (e.g., state parks)	4.4	2.9
<u>Websites/Organizations</u>		
DEC website	39.4	56.5**
Other websites	14.3	21.7
Fishing organizations	9.6	29.0**
<u>Mass media</u>		
Magazines	26.5	42.0**
Newspapers	20.2	15.9
Outdoor expos	13.0	23.2**
TV or radio	8.1	7.2

*Percentages add to more than 100% because more than one source could be checked.

**Statistically significant difference between those who were members of black bass clubs/organizations versus non-members at $P = 0.05$ using chi-square test.

Anglers who belong to bass clubs or organizations obtained their information mostly from the same sources as all anglers, with a few exceptions (Table 5). As would be expected, they were more likely to obtain information from fishing organizations and magazines (presumably from the organization they belonged to) than non-members. However, the percent obtaining information from fishing organizations was only 29%, although 100% indicated they belonged to a bass club or organization. Most organization members obtained their information from the fishing regulations guide or the DEC website.

Black Bass Fishing Activity in 2012

Three-quarters of responding anglers (74%) fished for black bass in 2012. Those who did so fished for an average of 18.8 days for black bass. The range was from 1 day to 201 days. Ten percent of responding anglers fished for other species, but not black bass in 2012, and 16% did not fish at all in 2012. Of those who fished in 2012, half (50%) fished more days for black bass than for other species, 8% spent the same number of days fishing for black bass as they did for other species, and 42% spent more time fishing for other species than for black bass. Even though all anglers indicated that black bass was among their top two favorite species to fish for in New York, not all of them were able to fish for black bass in 2012, and a large proportion spent more days fishing for other species.

Respondents were asked for more detailed information about their fishing activities on some of New York's most popular bass fishing waters (Connelly and Brown 2009). Among the six

waters listed, Lake Ontario was the most popular followed by the St. Lawrence River, Oneida Lake and Lake Erie (Table 6). However, none of these waters accounted for a very large percentage of anglers. It appears that anglers are fishing a large number of other waters in New York.

Table 6. Fishing activity in 2012 by fishing location.

Fishing location	Percent of bass anglers who fished for bass in 2012 who fished this location/ (sample size)	For those who fished this location:			
		Mean days fished/ (95% confidence interval)	Percent harvest bass	Percent use only catch and release	Percent participated in bass tournament
Lake Ontario	17.3 (64)	10.9 (± 4.1)	28.1	71.9	9.4
St. Lawrence River	15.4 (57)	6.6 (± 2.1)	33.3	66.7	5.3
Oneida Lake	12.4 (46)	7.2 (± 2.3)	26.1	73.9	13.0
Lake Erie	10.3 (38)	10.2 (± 3.7)	28.9	71.1	5.3
Lake Champlain	7.6 (28)	7.6 (± 2.6)	10.7	89.3	21.4
Hudson River	5.9 (22)	5.0 (± 1.4)	4.5	95.5	4.5
Other waters in NYS	83.2 (308)	15.7 (± 2.3)	28.6	71.4	6.2

About one-quarter to one-third of anglers harvest at least some bass from the listed waters, except Lake Champlain and the Hudson River where fewer anglers are harvesting fish and more are practicing catch and release only (Table 6). Less than one-quarter have participated in a bass tournament on any of the listed waters. Anglers fishing Lake Champlain were the most likely to have participated in a tournament on that water (21%).

Almost three-quarters (72%) of anglers were satisfied with their black bass fishing experiences in New York in 2012 (Table 7). The 13% who were dissatisfied wrote in the following reasons for their dissatisfaction:

- They didn't catch as many fish as they wanted to
- They felt there were fewer fish in the water
- The fish were too small
- The water levels were too low

Several people also mentioned negative impacts of tournaments on non-tournament anglers, and several others felt there were too many round gobies. Only one respondent wrote in that they were dissatisfied because there was too much catch and release going on before the June bass season.

Table 7. Angler satisfaction with black bass fishing experience in NY in 2012.

Satisfaction with black bass fishing experience in NY in 2012	Percent
Very satisfied	18.2
Satisfied	53.6
Neither satisfied nor dissatisfied	16.0
Dissatisfied	10.6
Very dissatisfied	1.6

Views on Black Bass Management

Anglers were asked about their views on several black bass management issues. First, they were asked about their views on the minimum size limit. They were told that the current minimum size limit is 12" and that is the general length at which bass can first reproduce. Most anglers thought the 12" limit should be kept as is (Table 8). This was especially true for older anglers and those who fished with natural baits. Very few thought the length should decrease. Among the 20% who thought the length should increase, 86% thought the minimum should be 14" or 15". The reason most frequently written in by respondents for wanting an increase in the minimum length was to allow for reproduction before harvest. Other reasons written in included: 1) allowing for larger, perhaps trophy-sized fish, in the future, 2) the belief that there is more meat on larger fish, and 3) the idea that smaller fish are too easy to catch, larger fish provide more of a challenge, more of a fight.

Table 8. Angler opinion on current 12" size limit for black bass, overall and by select angler characteristics.

	Opinion on current 12" size limit for black bass		
	Keep as is	Increase	Decrease
	Percent		
Overall	79.0	20.2	0.8
<u>Inclination to harvest legal size bass</u>			
Only use catch and release	77.1	22.3	0.6
Keep fish at least some of the time	81.0	17.9	1.1
<u>Most often fish for bass with:*</u>			
Artificial lures	76.3	22.8	0.9
Natural baits	87.4	11.9	0.7
<u>Angler age group*</u>			
Under 50	67.3	31.7	1.0
50-59	75.4	23.8	0.8
60+	83.7	15.8	0.5

*Statistically significant difference between groups at P = 0.05 using chi-square test.

Over three-quarters of all anglers wanted to see the 3rd Saturday in June kept as the harvest season opening date (Table 9). Older anglers were more likely to want to keep the opening date as is, compared with younger anglers. Those who harvested fish some of the time were more likely to want the harvest season to open earlier, but still most wanted to keep it as is. Very few anglers wanted the season to open later. A variety of reasons were given by the 19% who wanted the season to open earlier. Among the most frequently written in were: 1) an earlier start gives me more time to fish, 2) I have more free time to fish in June compared to later in the summer, 3) the fishing is better in June because of the colder water temperatures, 4) fish caught in colder water taste better, 5) most of the spawning is done earlier than the 3rd Saturday in June, 6) loss of shoreline fishing opportunity - as the water temperatures rise and water levels drop the fish move away from the shoreline, and 7) would like to see the regulations be similar to other states.

Table 9. Angler opinion on opening date for harvesting black bass, overall and by select angler characteristics.

	Opinion on opening date for harvesting black bass		
	Keep opening as is	Open earlier	Open later
	Percent		
Overall	79.5	19.4	1.1
<u>Inclination to harvest legal size bass *</u>			
Only use catch and release	83.2	15.7	1.1
Keep fish at least some of the time	75.1	23.9	1.0
<u>Most often fish for bass with:</u>			
Artificial lures	80.9	18.1	1.0
Natural baits	76.8	22.0	1.2
<u>Angler age group*</u>			
Under 50	76.8	20.4	2.8
50-59	75.0	25.0	0.0
60+	84.1	14.0	1.9

*Statistically significant difference between groups at P = 0.05 using chi-square test.

Ninety percent of anglers wanted to see the closing date of the harvest season of November 30 remain as is (Table 10). Almost all anglers fishing most often with natural baits wanted to keep the closing date as is.

Table 10. Angler opinion on closing date for harvesting black bass, overall and by select angler characteristics.

	Opinion on closing date for harvesting black bass		
	Keep closing as is	Close earlier	Close later
	Percent		
Overall	90.2	4.7	5.1
<u>Inclination to harvest legal size bass</u>			
Only use catch and release	92.5	3.4	4.1
Keep fish at least some of the time	87.6	6.0	6.4
<u>Most often fish for bass with:*</u>			
Artificial lures	88.6	5.6	5.8
Natural baits	96.2	2.3	1.5
<u>Angler age group</u>			
Under 50	89.8	4.5	5.7
50-59	86.8	6.6	6.6
60+	93.8	3.7	2.5

*Statistically significant difference between groups at P = 0.05 using chi-square test.

Special regulations could be instituted on certain waters to allow the number of black bass to increase or to increase an angler's chances of catching a larger black bass. Respondents were asked if they would support special regulations, such as lower creel limits or higher minimum size limits, to effect these changes on waters that they fished. Most anglers indicated they would support special regulations to increase the number of black bass on certain waters that they fished (Table 11). Anglers who only practiced catch and release, most often fished with artificial lures, or who were younger were more likely to support special regulations than their counterparts. About equal numbers of anglers opposed special regulations (19%) or had no opinion (16%).

Table 11. Angler support for special regulations to allow the number of black bass to increase on a water fished by the angler, overall and by select angler characteristics.

	Support for special regulations to allow the number of black bass to increase on a water fished by angler				
	Strongly support	Support	Oppose	Strongly oppose	No opinion
	Percent				
Overall	21.1	43.9	16.2	3.1	15.6
<u>Inclination to harvest legal size bass *</u>					
Only use catch and release		71.5	15.1		13.4
Keep fish at least some of the time		58.1	24.1		17.8
<u>Most often fish for bass with:*</u>					
Artificial lures		68.4	19.2		12.4
Natural baits		55.7	19.2		25.1
<u>Angler age group*</u>					
Under 50		69.0	17.7		13.3
50-59		69.5	18.4		12.1
60+		55.0	22.7		22.3

*Statistically significant difference between groups at P = 0.05 using chi-square test.

Similarly, a majority of anglers supported special regulations that would increase their chances of catching a larger black bass (Table 12). Support was strongest among younger anglers, with 73% supporting special regulations. Opposition to special regulations to increase an angler's chance of catching a larger bass was a bit more common than opposition to special regulations to increase the number of bass, especially among anglers who harvest at least some of the fish they catch.

Table 12. Angler support for special regulations to increase chances for catching a larger black bass on a water fished by the angler, overall and by select angler characteristics.

	Support for special regulations to increase chances for catching a larger black bass on a water fished by the angler				
	Strongly support	Support	Oppose	Strongly oppose	No opinion
	Percent				
Overall	19.1	40.4	21.2	3.2	16.1
<u>Inclination to harvest legal size bass *</u>					
Only use catch and release		68.4	17.6		14.0
Keep fish at least some of the time		49.7	32.1		18.2
<u>Most often fish for bass with:*</u>					
Artificial lures		63.4	23.7		12.9
Natural baits		49.7	24.6		25.7
<u>Angler age group*</u>					
Under 50		72.6	15.9		11.5
50-59		56.3	27.5		16.2
60+		51.0	28.5		20.5

*Statistically significant difference between groups at P = 0.05 using chi-square test.

Special regulations could be used to increase the number OR the size of black bass, but most anglers (85%) do not distinguish between the two reasons in terms of their support for special regulations. In other words, if they support special regulations to increase the number of black bass, they are very likely to also support special regulations to increase their chances of catching a larger black bass. Similarly, if they oppose special regulations for one reason they are also likely to oppose them for the other reason.

Six years ago, DEC changed the statewide regulations to allow catch and release fishing for black bass from Dec. 1 through the Friday before the regular season opens on the 3rd Saturday in June, with some exceptions. Anglers were asked if they fished during this catch and release season and if they thought the season should be continued. A little over 40% of respondents fished at some point during this season over the past six years (Table 13), with 18% fishing during the season in every year. Those who did only catch and release fishing, fish most often with artificial lures, and were under the age of 50 were more likely to utilize the winter/spring catch and release season compared with their counterparts. As would be expected among those who fished for black bass in 2012, those who fished the most (> 20 days for black bass) were more likely to have fished during the winter/spring season than those who fished less frequently (71% vs. 46%).

Table 13. Percent of anglers who fished during the winter/spring catch and release season for black bass, overall and by select angler characteristics.

	Fished during winter/spring catch and release season		
	No	Yes, in some years	Yes, in every year
	Percent		
Overall	57.1	25.0	17.9
<u>Inclination to harvest legal size bass *</u>			
Only use catch and release	46.8	27.6	25.6
Keep fish at least some of the time	68.4	22.4	9.2
<u>Most often fish for bass with:*</u>			
Artificial lures	53.1	25.8	21.1
Natural baits	67.6	23.4	9.0
<u>Angler age group*</u>			
Under 50	47.8	31.0	21.2
50-59	54.3	23.9	21.8
60+	65.1	21.7	13.2

*Statistically significant difference between groups at P = 0.05 using chi-square test.

Most anglers wanted to see the winter/spring catch and release season for black bass continue (Table 14), and continue as is. A few anglers were interested in seeing more areas opened during the season that are now closed, and fewer still were interested in seeing some areas that are currently open being closed. Younger anglers and those using only catch and release when fishing were more likely to want to see the season continue than their counterparts. Those fishing primarily for smallmouth bass were less likely than those fishing for largemouth bass or both species to want to see the winter/spring season continue.

Table 14. Angler opinion on continuing the winter/spring catch and release season for black bass, overall and by select angler characteristics.

	Angler opinion on continuing the winter/spring catch and release season				
	Yes, continue as is	Yes, continue and open more areas	Yes, continue but close some areas	Yes (combined)	No, close everywhere
	Percent				
Overall	66.3	8.9	3.6	78.8	21.2
<u>Inclination to harvest legal size bass *</u>					
Only use catch and release				84.8	15.2
Keep fish at least some of the time				71.6	28.4
<u>Most often fish for bass with:</u>					
Artificial lures				79.0	21.0
Natural baits				78.9	21.1
<u>Angler age group*</u>					
Under 50				83.8	16.2
50-59				79.1	20.9
60+				71.6	28.4
<u>Fish primarily for:*</u>					
Smallmouth bass				66.7	33.3
Largemouth bass				77.1	22.9
Both				83.9	16.1

*Statistically significant difference between groups at P = 0.05 using chi-square test.

Virtually all (97%) of the anglers who fished during the winter/spring catch and release season wanted to see it continue in the future. Most of those (65%) who didn't fish during the season also want to see it continue in the future.

Half of the anglers were satisfied with the job the DEC Bureau of Fisheries is doing managing black bass in New York State, and an additional 16% were very satisfied. Those who did only catch and release fishing were more likely to be satisfied than those harvesting fish at least some of the time, but the majority were still satisfied (Table 15). The most avid anglers (those fishing >20 days for black bass) were also the ones most likely to be satisfied compared to those who fished fewer days (78% vs. 60%).

Dissatisfaction with the job DEC is doing managing black bass was very low (Table 15). Those who were dissatisfied were asked to write in what they thought needed to be improved. A variety of suggestions were made (Note: each suggestion was made by only a few anglers):

- Control invasive species
- Control cormorants
- More enforcement is needed

- The number of tournaments should be reduced
- Bass should be stocked
- DEC should manage to increase the number of bass.

Table 15. Angler satisfaction with DEC Bureau of Fisheries management of black bass in NY, overall and by select angler characteristics.

	Satisfaction with DEC Bureau of Fisheries management of black bass in NY					
	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	No opinion
	Percent					
Overall	16.1	49.7	21.8	4.2	1.4	6.8
<u>Inclination to harvest legal size bass *</u>						
Only use catch and release		70.3	19.9	3.9		5.9
Keep fish at least some of the time		59.9	24.6	7.6		7.9
<u>Most often fish for bass with:</u>						
Artificial lures		66.9	20.9	5.7		6.5
Natural baits		63.7	23.8	5.4		7.1
<u>Angler age group</u>						
Under 50		70.5	16.1	5.4		8.0
50-59		59.9	27.5	5.6		7.0
60+		65.5	20.3	7.1		7.1

*Statistically significant difference between groups at P = 0.05 using chi-square test.

Anglers were asked to indicate their level of support for a variety of actions that could be taken by DEC or other organizations to improve black bass fishing opportunities in New York. The most strongly supported action, by two-thirds of anglers, was to manage habitat for black bass reproduction and growth (Table 16). Developing and improving access sites and communicating more with anglers about black bass fishing opportunities were strongly supported by about 40% of anglers. This set of actions was more strongly supported by men than by women, and by more avid anglers than by those less active.

Actions that received some or moderate support included: 1) more closely monitoring black bass tournaments, 2) implementing catch and release regulations year round on certain waters, 3) managing for trophy size black bass in certain waters, and 4) simplifying regulations for black bass (Table 16). The actions associated with catch and release angling and trophy size fish were more strongly supported by those who did only catch and release fishing, fished with artificial lures, and were younger compared with their counterparts.

Table 16. Angler support for various potential black bass-related actions in New York.

Potential actions	Support for various potential black bass-related actions in New York				Mean*
	No support	Some support	Moderate support	Strong support	
	(1)	(2)	(3)	(4)	
	Percent				
Manage habitat for black bass reproduction and growth	2.3	11.3	23.8	62.6	3.5
Develop new boat access sites on popular black bass waters	12.5	21.4	24.7	41.4	3.0
Improve boat access sites on popular black bass waters	11.0	19.7	29.6	39.7	3.0
Communicate more with anglers about black bass fishing opportunities	7.2	24.1	32.0	36.7	3.0
More closely monitor black bass tournaments	15.5	22.3	23.8	38.4	2.9
Implement catch and release regulations year round on certain waters	22.3	27.5	22.8	27.4	2.6
Manage for trophy size black bass in certain waters	18.6	34.2	25.7	21.5	2.5
Simplify regulations for black bass	18.2	30.2	29.7	21.9	2.5

*Mean score based on a 4-point scale where 1 = no support, 2 = some support, 3 = moderate support, and 4 = strong support.

Participation in and Views on Black Bass Tournaments in New York

Most anglers (88%) had not participated in a black bass tournament in New York State in the past 5 years. Of those, most (77%) indicated they would not be interested in participating in the future either. Among the 12% of anglers who did participate in a tournament in the past 5 years, the majority (56%) participated in a tournament every year. The average number of years of participation was 3.9 years (range 1 to 5).

We created a “tournament interest” variable with three levels to use in the analysis of other tournament-related questions. The first level was termed “no interest” because anglers in this group had not participated in a tournament in the past 5 years and had no interest in participating in the future. This group comprised 68% of anglers. The second level was “interest, but no participation.” This group was interested in participating in tournaments in the future, but had not participated in the past 5 years, and contained 20% of anglers. The last group, representing 12% of anglers, had participated in a tournament in the past 5 years. The sum of the last two groups, comprising 32% of all anglers, have either participated in a tournament in the past 5 years or have interest in participating in the future.

Interest in tournament participation was strongly related to whether an angler used only catch and release when fishing for black bass. Eighty percent of anglers who participated in a tournament used only catch and release practices for all of their black bass fishing, compared to 50% of those with no interest in tournaments and 53% of those with interest, but who have not

yet participated in a tournament. Anglers not interested in tournaments were a bit more likely to be primarily interested in fishing for smallmouth bass compared to those with interest or who had participated in tournaments (25% vs. 14% and 9%, respectively). Anglers who participated in tournaments were 2 to 4 times more likely to belong to a black bass fishing club or organization than those with no interest or interest but no participation (43% vs. 6% and 12%).

Anglers were asked to indicate their level of agreement with 10 statements about black bass tournaments. The two statements that the greatest number of anglers agreed with were tournaments provide an important boost to local economies and tournaments should be held only on larger waters with adequate boat access (Table 17). Over half of the anglers agreed with these statements. Those who had participated in tournaments were more likely than other anglers to believe that tournaments provide an important boost to local economies (Table 18). Somewhat conversely, anglers with no interest in tournament participation were more likely than those with interest or who had participated to think that tournaments should be held only on larger waters with adequate boat access. Anglers who had participated in tournaments were on average neutral in regard to whether tournaments should be held only on larger waters with adequate boat access.

Table 17. Anglers' views on black bass tournaments.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know
<u>Opinions about tournaments</u>	Percent					
Tournaments provide an important boost to local economies	14.7	48.4	21.9	3.8	3.2	8.0
Tournaments should be held only on larger waters with adequate boat access	18.4	35.3	25.5	8.3	4.6	7.9
An end of day weigh-in of fish is a necessary part of tournaments, in comparison to a weigh and immediate release format (i.e., honor system)	13.4	28.1	27.2	9.6	8.6	13.1
Tournaments are an important tool to promote catch and release fishing	11.1	31.8	25.9	12.8	7.6	10.8
Tournaments can reduce the quality of the fishing experience for non-tournament anglers	14.9	26.8	21.9	17.3	6.9	12.2
Most of the fish caught in a tournament and then released survive	12.0	25.9	18.4	17.3	6.2	20.2
The release of black bass at tournaments results in lots of fish at the release site and limited movement to other areas	8.5	16.4	28.1	17.8	5.4	23.8
There are not enough weekends without tournaments on the waters I want to fish	6.4	10.3	38.3	20.4	7.9	16.7
I would like more opportunities to fish in black bass tournaments in New York	7.2	12.2	42.0	12.4	16.8	9.4
Fishing should be non-competitive and fishing tournaments should not be permitted	7.7	4.8	27.0	32.6	24.2	3.7

Over 40% of anglers thought an end of day weigh-in of fish was a necessary part of tournaments, in comparison to a weigh and immediate release format (Table 17). Those with interest in tournaments were more likely to agree; those with no interest were more likely to be neutral in their views (Table 18). Similarly for the idea that tournaments are an important tool to promote catch and release fishing; over 40% agreed with the statement. Those who were interested in tournaments were more likely to agree than those with no interest.

Two statements asked about the impact of tournaments on non-tournament anglers. Anglers, especially those with no interest in tournaments, were more likely to agree with the general statement that tournaments can reduce the quality of the fishing experience for non-tournament anglers, than the more personal statement of “there are not enough weekends without tournaments on the waters I want to fish” (Table 18). A plurality of anglers was neutral about the personal impact statement (Table 17).

Two statements asked anglers about their understanding of the impacts of tournaments on fish. Almost one-quarter of anglers did not know about the effects of tournaments on fish (Table 17). (Eighty-five percent of those indicating they didn’t know fell into the “no interest” group.) Almost 40% of anglers believed that most of the fish caught in a tournament and then released survive. This view was held by more anglers with interests in tournaments than those with no interest (Table 18). Fewer anglers in general (25%) believed that the release of black bass at tournaments results in lots of fish at the release site and limited movement to other areas. Those without tournament experience were more likely to believe this than those who had participated in a tournament.

On a personal level, some people were interested in having more opportunities to fish in black bass tournaments in New York and others were not (Table 17). A plurality was neutral in this regard. As would be expected, those with interest in tournament participation were far more likely to want to have more opportunities to participate than those with no interest (Table 18).

The strongest level of disagreement was associated with the statement that “fishing should be non-competitive and fishing tournaments should not be permitted.” One-quarter of the anglers indicated that they strongly disagreed with the statement (Table 17). Very few agreed. As expected, those with no interest in tournament participation were more likely to agree, but even among this group, the average was less than neutral and leaning toward disagree.

As was noted above, there is a relationship between tournament participation and use of catch and release fishing practices and interest in smallmouth bass fishing. We found generally that both tournament anglers and anglers who engaged only in catch and release fishing were more likely to agree with the same statements. Similarly, anglers focused primarily on smallmouth bass and anglers with no interest in tournaments were likely to agree with the same statements.

Table 18. Anglers' views on black bass tournaments, average score overall and by their level of interest in tournament participation.

	Overall	Tournament Interest		
		No interest	Interest, but no participation	Participated in past 5 years
Opinions about tournaments	Mean score*			
Tournaments provide an important boost to local economies	3.7	3.6 ^a	3.8 ^a	4.2 ^b
Tournaments should be held only on larger waters with adequate boat access	3.6	3.8 ^a	3.3 ^b	3.0 ^b
An end of day weigh-in of fish is a necessary part of tournaments, in comparison to a weigh and immediate release format (i.e., honor system)	3.3	3.1 ^a	3.6 ^b	3.9 ^b
Tournaments are an important tool to promote catch and release fishing	3.3	3.0 ^a	3.6 ^b	3.9 ^b
Tournaments can reduce the quality of the fishing experience for non-tournament anglers	3.3	3.6 ^a	3.0 ^b	2.7 ^b
Most of the fish caught in a tournament and then released survive	3.3	3.0 ^a	3.6 ^b	3.8 ^b
The release of black bass at tournaments results in lots of fish at the release site and limited movement to other areas	3.1	3.2 ^a	3.1 ^a	2.6 ^b
There are not enough weekends without tournaments on the waters I want to fish	2.8	2.9 ^a	2.8 ^a	2.6 ^a
I would like more opportunities to fish in black bass tournaments in New York	2.8	2.2 ^a	3.8 ^b	3.8 ^b
Fishing should be non-competitive and fishing tournaments should not be permitted	2.4	2.7 ^a	1.9 ^b	1.5 ^c

*Mean score based on a 5-point scale where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree.

^{a,b,c} Values without a letter in common are significantly different at P = 0.05 using Scheffe's test.

Questions have arisen about the extent to which non-tournament participants are impacted by tournaments occurring where they are fishing. We found that about one-third of our respondents had fished on a lake in the past 5 years when a black bass tournament was being held and they were not a participant (Table 19). This occurred on average 9 days over the past 5 years for these anglers. Those who had participated in a tournament were twice as likely to have fished on a lake as a non-participant compared to those who had not participated in a tournament.

Among those who had experience fishing a water body when a tournament was in progress, half indicated that the quality of their fishing experience was not affected by the tournament (Table 19). Among those who had been affected, most had been negatively affected, but some reported a positive experience. Those with no interest in tournaments were more likely to report a negative impact compared with those who were interested in tournament participation.

Table 19. Experiences of non-tournament anglers, overall and by their interest in tournament participation.

	Tournament interest			
	Overall	No interest	Interest, but no participation	Participated in past 5 years
	Percent			
<u>Fished on a lake when tournament underway, but not a participant*</u>				
No	58.3	63.3	52.4	24.2
Not sure	7.0	5.8	10.7	3.0
Yes	34.7	30.9	36.9	72.8
<u>If yes, was quality of fishing experience affected by the tournament*</u>				
No	50.6	42.3	69.2	60.4
Yes, positively	6.9	6.3	10.3	4.2
Yes, negatively	42.5	51.4	20.5	35.4

*Statistically significant difference between groups with different levels of interest in tournaments at $P = 0.05$ using chi-square test.

The majority of anglers who had a negative experience indicated their experience was negatively affected in at least one of three ways, overcrowding on the water, overcrowding at the launch site, or lack of courtesy by tournament anglers (Table 20). Illegal activities by tournament anglers were not a concern of very many anglers. When considering all respondents to the survey, the percent who indicated a specific way their experience was negatively impacted accounted for 10% or less of respondents. This was because only one-third had fished when a tournament was in progress, and only two-fifths of them had been negatively impacted.

Table 20. Negative ways non-tournament participants fishing experiences were affected by tournaments.

	Of those negatively impacted	Of all survey respondents
<u>Ways experience was negatively affected</u>	Percent checking*	
Overcrowding on the water	68.3	10.2
Overcrowding at the launch site	66.3	9.9
Lack of courtesy by tournament anglers	54.5	8.2
Illegal activities by tournament anglers	6.9	1.0
Other ways	21.8	3.3

*Percentages add to more than 100% because more than one source could be checked.

Anglers could also write in other ways their experience was negatively affected and most who wrote in comments tended to elaborate on the category of “lack of courtesy by tournament anglers.” Their comments included things like “boats speeding by,” “wakes in no wake zones,” “tournament anglers didn’t follow dive rules while I was diving,” and “tournament anglers were rude.” Other comments mentioned by anglers but not covered by the categories in Table 20

included: crowding in the local community, fish not biting or already removed by tournament anglers, and numerous dead fish on land and in the water.

Anglers were given the opportunity to share additional thoughts on black bass tournaments in New York, and one-third took the opportunity to do so. They primarily reiterated topics already discussed such as the value of tournaments to the local economy, concerns about the survival of fish caught in tournaments, how far fish move from the release site, and the desire to have tournaments primarily on large waters. Others made comments not related to tournaments, and a few said they appreciated the work DEC did and the fact that they were being asked for their opinion.

CONCLUSIONS AND RECOMMENDATIONS

The response rate to this survey was quite high compared to recent angler surveys (e.g., Connelly and Knuth 2010, Connelly and Brown 2009). This gives us more confidence that the results are representative of anglers with a preference for black bass fishing in New York. The difference in age between respondents and non-respondents may be a source of bias in the data, with the potential for bias increased because our sample did not include newly licensed, generally younger, anglers. If we weighted the data to account for the difference in age, there would only be a change of one to two percent for any given management preference question. This gives an indication of the likely degree of change due to age. However, we have no way to know the impact of “newly licensed” anglers.

The majority of anglers did not distinguish between largemouth and smallmouth bass, favoring and fishing for each equally. Management preferences were not related to species preference; this suggests that managers can consider the interests of black bass anglers as a group, rather than partitioning interests of largemouth bass anglers versus smallmouth bass anglers.

Anglers used a variety of sources for information on black bass fishing in New York, but 85% of respondents obtained information about black bass fishing from at least one of the four DEC sources listed in the questionnaire (i.e., fishing regulations guide, other DEC publications, DEC website, and DEC personnel). DEC’s use of these communication sources in the future to provide anglers with information about black bass will likely reach most anglers. Few anglers were members of a black bass fishing club or organization, and most members obtained information from the fishing regulations guide or the DEC website.

Even though all anglers indicated that black bass was among their top two favorite species to fish for in New York, not all of them were able to fish for black bass in 2012; a large proportion spent more days fishing for other species. Although fish preference and actual behavior may typically correspond, species preference and fishing behavior are not interchangeable concepts.

Fishing on waters other than the six listed in the survey accounted for the majority of angling activity in 2012. This suggests that anglers are dispersed in their bass fishing in New York.

Almost three-quarters (72%) of anglers were satisfied with their black bass fishing experiences in New York in 2012. While satisfaction with the fishing experience can be influenced by a variety of factors, some are within the agency's control (e.g., creel limits) and some are outside the agency's control (e.g., weather). This high level of satisfaction may be difficult to improve upon via factors within the agency's control, but would be a useful topic for managers' discussion.

On management issues:

- Most anglers thought the 12" minimum size limit should be kept as is.
- Over three-quarters of all anglers wanted the 3rd Saturday in June kept as the harvest season opening date.
- Ninety percent of anglers wanted to see the closing date of the harvest season of November 30 remain as is.
- Most anglers indicated they would support special regulations to increase the number of black bass on certain waters that they fished.
- Similarly, a majority of anglers supported special regulations that would increase their chances of catching a larger black bass.
- Support or opposition for special regulations appears to exist regardless of the objective for the regulation. In other words, if anglers support special regulations to accomplish increasing the number of black bass, they are very likely to also support special regulations to increase their chances of catching a larger black bass. Similarly, if anglers oppose special regulations intended to achieve a particular objective they are also likely to oppose special regulations intended to achieve another objective.
- Most anglers wanted to see the winter/spring catch and release season for black bass continue, and continue as is. More than 40% of respondents fished at some point during the winter/spring catch and release season over the past six years. Virtually all (97%) of the anglers who fished during the winter/spring catch and release season wanted to see it continue in the future. Most of those (65%) who didn't fish during the season also wanted to see it continue in the future.

Older anglers (aged 60+) wanted to maintain the status quo on most management issues listed above. Because the sample includes some bias toward older anglers, the results above are skewed toward stronger support for the status quo by at least one to two percentage points. The difference may be even a bit higher due to the impact of "newly licensed" anglers who are not included in the sample, but the amount of impact, while likely small, is not known.

Most anglers were satisfied with the job DEC, Bureau of Fisheries was doing managing black bass. The most avid anglers (those fishing >20 days for black bass) were also the ones most likely to be satisfied compared to those who fished fewer days (78% vs. 60%). DEC, Bureau of Fisheries may take pride in this high level of satisfaction, and work to address the concerns raised in the results section to perhaps further increase satisfaction levels. Fisheries staff may also consider focusing on actions supported by many anglers, such as managing habitat for black bass reproduction and growth, developing and improving access sites, and communicating more with anglers about black bass fishing opportunities. DEC, Bureau of Fisheries also may partner with other organizations to implement some of these actions.

Two-thirds of anglers had not participated in a black bass tournament in New York in the past 5 years and had no interest in participating in the future. The remainder (32%) had either participated in a tournament in the past 5 years, or had interest in participating in the future. Anglers who participated in tournaments were more likely to belong to a black bass fishing club or organization.

Anglers who have participated in a tournament think: a) tournaments provide a boost to local economies, b) a weigh-in is a necessary part of tournaments, c) tournaments are an important tool to promote catch and release fishing, d) most released fish survive, and e) they would like to have more opportunities to fish in black bass tournaments in New York. Those with no interest in fishing in a tournament tended to agree that tournaments provide an economic boost, but they were generally neutral on the other items, and disagreed about wanting more opportunities to participate in tournaments. Those with no interest in tournament participation also think tournaments should be held only on larger waters, and that they reduce the quality of the fishing experience for non-tournament anglers, but do not think they should be banned. More information could be provided on the effects of tournaments on fish, as one-quarter do not know what the impacts are.

We hope that results of this study will assist DEC, Bureau of Fisheries managers and others interested in black bass fishing in better understanding the views of black bass anglers in New York. Discussion among fisheries managers about these results may help DEC achieve their goal of managing and conserving the freshwater fisheries of New York State to serve the interests of current and future generations of New Yorkers.

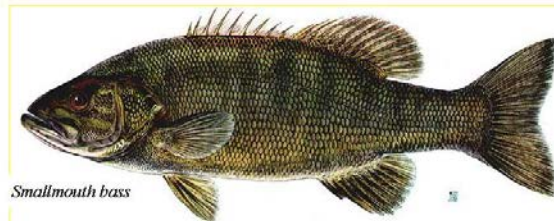
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APPENDIX A

Study Questionnaire

NEW YORK BLACK BASS ANGLER SURVEY



Smallmouth bass



Largemouth bass



New York State Department of
Environmental Conservation
Bureau of Fisheries



Cornell University
Human Dimensions Research Unit

NEW YORK BLACK BASS ANGLER SURVEY

Research conducted by the
Human Dimensions Research Unit
Department of Natural Resources
Cornell University
in cooperation with the
New York State Dept. of Environmental Conservation (DEC)
Bureau of Fisheries

The purpose of this survey is to learn about your black bass fishing experiences in New York, and your opinions about black bass management. Cornell University is conducting this survey to provide DEC Bureau of Fisheries with important information on the views of anglers fishing in New York. The Bureau of Fisheries will use this information to guide decisions about black bass management in New York.

Your name was selected from a list of people who responded to the New York statewide angler survey we conducted in 2007 and who agreed to be contacted again by us for further information about their fishing experiences and preferences. In 2007 you said black bass (smallmouth or largemouth bass) was among your favorite species to fish for in New York State.

Please complete this questionnaire as soon as you can, seal it with the white re-sealable label provided, and drop it in any mailbox; return postage has been paid. Your participation in this survey is voluntary, but we sincerely hope you will take just a few minutes to answer our questions. Your identity will be kept confidential and the information you give us will never be associated with your name.

THANK YOU FOR YOUR HELP!

1. Back in 2007 you told us that black bass (smallmouth, largemouth) were among your favorite species to fish for in New York State. Is either largemouth or smallmouth bass among your top 2 favorite species today? *(Check one.)*

☐ No

☐ Yes → Is either of these your most favorite species to fish for in New York? *(Check one.)*

☐ No (some other species is my most favorite)

☐ Yes, largemouth bass is my most favorite

☐ Yes, smallmouth bass is my most favorite

☐ Yes, largemouth and smallmouth are equally my most favorite

2. When you go fishing for bass, do you fish: *(Check one.)*

☐ Primarily for largemouth bass

☐ Primarily for smallmouth bass

☐ For both largemouth and smallmouth bass

3. What do you use most often when you fish for bass? *(Check the one used most often.)*

☐ Artificial lures

☐ Baitfish

☐ Other natural baits (e.g., crayfish, insects, pork rinds, worms)

4. Do you typically harvest (keep) the largemouth and smallmouth bass you catch if they are of legal size? *(Check one in each column.)*

	Largemouth bass	Smallmouth bass
No	<input type="checkbox"/>	<input type="checkbox"/>
Yes, some of the time	<input type="checkbox"/>	<input type="checkbox"/>
Yes, most of the time	<input type="checkbox"/>	<input type="checkbox"/>
Yes, always	<input type="checkbox"/>	<input type="checkbox"/>

5. When fishing for black bass, how important is it to you to: *(Check one box for each statement.)*

	Not at all Important	Somewhat Important	Important	Very Important	Extremely Important
Catch a trophy-sized bass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Catch a lot of bass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Catch at least one bass on every trip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Catch at least one bass on most trips	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Did you spend any time fishing specifically for black bass (smallmouth, largemouth) so far this year, 2012?

☐ No (SKIP to Question 9)

☐ Yes

7. How many days did you fish primarily for black bass on the following waters? And did you harvest bass, only use catch and release fishing, or participate in a bass tournament on that water?

Fishing Location	Number of Days	Did you: <i>(check all that apply)</i>		
		Harvest bass of legal size	Only use catch and release	Participate in a bass tournament
Hudson River		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lake Champlain		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lake Erie		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lake Ontario		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oneida Lake		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
St. Lawrence River		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other waters in NYS		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. How satisfied were you with your black bass fishing experiences in New York in 2012?

- ☐ Very satisfied
☐ Satisfied
☐ Neither satisfied nor dissatisfied
☐ Dissatisfied
☐ Very dissatisfied

If you were dissatisfied, please tell us why: _____

9. How many days did you fish primarily for other species in New York so far in 2012? *(Please write in zero if you didn't fish for other species.)*

_____ # of days fished for other species

Opinions on Black Bass Management in New York

10. The current statewide minimum size limit for black bass is 12". (This is the general length at which bass can first reproduce.) What do you think about the current size limit? *(Check one.)*

- ☐ Keep as is
☐ Increase to _____ inches
☐ Decrease to _____ inches

If you are suggesting a change, please explain why: _____

11. The current statewide fishing season for harvesting black bass in New York begins on the 3rd Saturday in June and ends on November 30. What do you think about the current dates? *(Check one in each column.)*

- | <u>Opening</u> | <u>Closing</u> |
|---|---|
| <input type="checkbox"/> Keep opening as is | <input type="checkbox"/> Keep closing as is |
| <input type="checkbox"/> Open earlier | <input type="checkbox"/> Close earlier |
| <input type="checkbox"/> Open later | <input type="checkbox"/> Close later |

If you are suggesting a change, please explain why: _____

12. To allow the number of black bass to increase on a water that you fish, would you support special regulations on that water that are more restrictive than the current statewide regulations (for example, lower creel limits or raise minimum size limits)?

- ☐ Strongly support
☐ Support
☐ Oppose
☐ Strongly oppose
☐ No opinion

13. To increase your chances of catching a larger black bass on a water that you fish, would you support special regulations on that water that are more restrictive than the current statewide regulations (for example lower creel limits or raise minimum size limits)?

- ☐ Strongly support
☐ Support
☐ Oppose
☐ Strongly oppose
☐ No opinion

14. Six years ago, DEC changed the statewide regulations to allow catch and release fishing for black bass from Dec. 1 through the Friday before the regular season opens on the 3rd Sat. in June (with a few exceptions). Have you fished for black bass during this catch and release season? *(Check one.)*

- ☐ No
☐ Yes, in some years
☐ Yes, in every year

15. Do you think the regulation allowing catch and release fishing for black bass between Dec. 1 and the Friday before the 3rd Sat. in June should continue? *(Check one.)*

- ☐ Yes, continue as is
☐ Yes, continue but open some areas that are now closed
☐ Yes, continue but close some areas that are now open
☐ No, close the season everywhere

DEC, Bureau of Fisheries is charged with managing and conserving the freshwater fisheries of New York State to serve the interests of current and future generations of New Yorkers.

16. How satisfied are you with the job DEC Bureau of Fisheries is doing managing black bass in New York State?

- ☐ Very satisfied
☐ Satisfied
☐ Neither satisfied nor dissatisfied
☐ Dissatisfied
☐ Very dissatisfied
☐ No opinion

If you are dissatisfied, what do you think needs to be improved?

17. How strongly do you support each of the following potential black bass-related actions in New York State: *(Check one box for each action.)*

	No Support	Some Support	Moderate Support	Strong Support
Manage for trophy size black bass in certain waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implement catch and release regulations year round on certain waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Simplify regulations for black bass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More closely monitor black bass tournaments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communicate more with anglers about black bass fishing opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop new boat access sites on popular black bass waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve boat access sites on popular black bass waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manage habitat for black bass reproduction and growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Opinions on Black Bass Tournaments in New York

18. Have you participated in a black bass tournament in New York State in the past 5 years (2008 to present)?

- ☐ No → Would you like to in the future? ☐ No ☐ Yes
☐ Yes → In how many of the past 5 years? _____ # of years

19. Anglers have expressed a variety of opinions about tournaments. Please indicate how strongly you agree or disagree with the following statements about black bass tournaments? (Check one box for each statement.)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know
I would like more opportunities to fish in black bass tournaments in New York	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tournaments should be held only on larger waters with adequate boat access	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most of the fish caught in a tournament and then released survive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The release of black bass at tournaments results in lots of fish at the release site and limited movement to other areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tournaments are an important tool to promote catch and release fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tournaments can reduce the quality of the fishing experience for non-tournament anglers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are not enough weekends without tournaments on the waters I want to fish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tournaments provide an important boost to local economies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fishing should be non-competitive and fishing tournaments should not be permitted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An end of day weigh-in of fish is a necessary part of tournaments, in comparison to a weigh and immediate release format (i.e., honor system)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. Have you fished on a lake in the past 5 years when a black bass tournament was being held and you were not a participant?

☐ No (SKIP to Question 23)
☐ Not sure (SKIP to Question 23)
☐ Yes → On how many days did this happen in the past 5 years?
 _____ # of days

21. Do you think the quality of your fishing experience(s) was affected by the tournament?

☐ No (SKIP to Question 23)
☐ Yes, positively (SKIP to Question 23)
☐ Yes, negatively (CONTINUE with Question 22)

22. Please check below the ways that your experience(s) was negatively affected: (Check all that apply.)

☐ Overcrowding at the launch site
☐ Overcrowding on the water
☐ Lack of courtesy by tournament anglers
☐ Illegal activities by tournament anglers
☐ Other (Please describe: _____)
 _____)

23. Please share any additional thoughts you may have on black bass tournaments in New York:

BACKGROUND INFORMATION

Hold for back cover with business reply

24. Where do you go for information on black bass fishing in New York State? *(Check all that apply.)*

- ☐ Fishing regulations guide
- ☐ Other DEC publications
- ☐ DEC website
- ☐ Other websites
- ☐ DEC personnel
- ☐ Other government employees (e.g., state parks)
- ☐ Charter boat captains or fishing guides
- ☐ Fishing organizations
- ☐ Friends and family
- ☐ Newspapers
- ☐ Magazines
- ☐ TV or radio
- ☐ Outdoor expos

25. Is your primary residence: *(Check one.)*

- ☐ Urban ☐ Suburban ☐ Rural

26. Are you a member of a black bass fishing club or organization?

- ☐ No ☐ Yes

Please use the space below for any comments you wish to make.

Thank you for your time and effort!

To return this questionnaire, simply seal it with the white removable seal, and drop it in the mail (return postage has been paid).

APPENDIX B

Tests for Non-response Bias

Table B- 1. Tests for non-response bias, using data available from entire sample.

Information available from the license	<u>Respondents</u>	<u>Non-respondents</u>
	Percent	
Gender		
Male	89.6	89.3
Female	10.4	10.7
	NS	
State of residence		
New York	91.2	89.9
Other	8.8	10.1
	NS	
	Mean	
Age	58	52
	(+ = 7.0, df = 989, p < 0.001)	

Table B- 2. Tests for non-response bias from the non-respondent telephone follow-up.

Questions	Respondents Percent	Non-respondents
Smallmouth or largemouth bass among top two favorite species		
No	7.9	12.0
Yes	92.1	88.0
	NS	
Fish for black bass in 2012		
No	29.6	48.0
Yes	70.4	52.0
	$(\chi^2 = 13.5, df = 1, p < 0.001)$	
Satisfaction with black bass fishing experiences in 2012		
Very satisfied	17.7	28.8
Satisfied	53.8	46.2
Neither satisfied nor dissatisfied	16.6	1.9
Dissatisfied	10.4	17.3
Very dissatisfied	1.5	5.8
	$(\chi^2 = 16.7, df = 4, p < 0.002)$	
Typically keep largemouth bass		
No	60.1	71.0
Yes, some of the time	26.9	19.0
Yes, most of the time	8.4	4.0
Yes, always	4.6	6.0
	NS	
Typically keep smallmouth bass		
No	58.1	70.0
Yes, some of the time	27.6	19.0
Yes, most of the time	9.7	4.0
Yes, always	4.6	7.0
	$(\chi^2 = 8.8, df = 3, p < 0.03)$	
Fish during catch and release season		
No	58.1	69.0
Yes, in some years	24.7	16.0
Yes, in every year	17.2	15.0
	NS	
Satisfaction with DEC, Bureau of Fisheries black bass management		
Very satisfied	15.7	19.0
Satisfied	49.3	52.0
Neither satisfied nor dissatisfied	22.3	2.0
Dissatisfied	4.3	4.0
Very dissatisfied	1.5	5.0
No opinion	6.9	18.0
	$(\chi^2 = 37.7, df = 5, p < 0.001)$	

Continued next page

Table B-2 (cont.)

	<u>Respondents</u>	<u>Non-respondents</u>
Participate in black bass tournament in past 5 years	Percent	
No	88.3	94.0
Yes	11.7	6.0
	NS	
Would like more opportunities to fish in black bass tournaments in New York		
Strongly agree	7.2	8.0
Agree	12.2	17.0
Neutral	42.7	28.0
Disagree	11.8	32.0
Strongly disagree	16.6	14.0
Don't know	9.5	1.0
	$(\chi^2 = 38.2, df = 5, p < 0.001)$	
Most fish caught in tournament, then released survive		
Strongly agree	11.7	13.0
Agree	25.9	45.0
Neutral	18.5	5.0
Disagree	17.0	10.0
Strongly disagree	6.3	0.0
Don't know	20.6	27.0
	$(\chi^2 = 31.5, df = 5, p < 0.001)$	
Tournaments can reduce quality of fishing experience for non-tournament anglers		
Strongly agree	14.6	9.0
Agree	27.0	23.0
Neutral	22.2	9.0
Disagree	16.9	41.0
Strongly disagree	6.5	8.0
Don't know	12.8	10.0
	$(\chi^2 = 35.7, df = 5, p < 0.001)$	
	Mean	
Days fished for black bass in 2012	18.6	11.1
	$(t = 4.5, df = 160, p < 0.001)$	